A Break in the Clouds: A Proposed Framework for Analyzing Cloud Computing Transactions

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How Every Seminar on Cloud Computing Starts…
What is Cloud Computing?

“Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.”

National Institute of Standards and Technology (2011)
Essential Characteristics

- Network access
- Pooled resources
- On demand
- Elasticity
- Measured service
- Provider managed
Cloud Computing Models

- Infrastructure as a Service
- Platform as a Service
- Software as a Service
- Provision of Content
Examples – Infrastructure as a Service

- Data storage
- Compute capacity
- Virtual machines
- Networking
- Load balancing
- Data caching
- VOIP
Examples – Platform as a Service

– Web server
– Database
– Runtime libraries
– Development tools
Examples – Software as a Service

- Hosted enterprise apps (CRM, etc)
- Virtual desktop (office suites, etc)
- Online gaming
- Anti-virus screening
- Online advertising
- Web mail
- Social networking
- Data mining and analytics
Examples – Other Transactions

- Streaming digital content (music, video, etc)
- Downloaded digital content (music, e-books, etc)
- Remote monitoring and testing
- Remote delivery of personal services
  - Professional services (doctors, lawyers, accountants, consultants, etc)
  - Customer support (help desk, IT support, etc)
Agenda

– Demystification of Cloud Computing
– Income Characterization
– Source of Income
– Nexus
– BEPS
The Policy Questions

- Is this new, or did the OECD TAGs find the answers?
- Does the three step character, source and nexus approach remain appropriate?
- Is character too malleable?
- Is source supposed to identify the location of value creation or something else?
- What economic activity should identify the jurisdiction with the right to tax?
The Policy Questions

- Will the migration to mobile platforms change everything (or anything)?
- Does the US need to play a leadership role to influence international behavior?
- What should the US do if BEPS Action 1 becomes real?
- Is a legislative solution required?
Where is the Cloud Located?
Located in specific (albeit variable) places
Character

- Threshold issue for US and foreign tax purposes
- Depending on the particular transaction, possibilities include:
  - Sale
  - License
  - Lease
  - Services
- Are new rules needed?
- Or just a thoughtful application of existing law?
Character – Are the Software Regulations the Solution?

– Very influential early e-commerce guidance
– Express important principles which are useful in cloud
  ▪ Form of transaction adopted by the parties not determinative
  ▪ IP v. product/service
  ▪ Preamble explains that “functionally equivalent transactions should be treated similarly”
Character – Treas. Reg. § 1.861-18

- Does Treas. Reg. § 1.861-18 apply to transactions in the cloud? If so, how?
  - Software regulations apply to transactions involving the “transfer” of a computer program
    - In a SaaS transaction, has there been “a transfer” of a computer program?
  - Software regulations define IP transactions as involving the transfer of certain rights
    - Hosting of a computer program with access to customers for a fee = “distribution to the public” or “publicly display”? 
Character – Treas. Reg. § 1.861-18

- Does the 2 X 2 framework provide a model?
  - Cloud issues not divided along analogous lines
  - Not even much of a continuum in practice
- Does the distinction of “royalty” vs. other transactions remain relevant?
  - Yes, along with substance v. form concepts
- Conclusion: -18 should apply only to transactions expressly covered
Character – What Framework to Apply to Cloud

- First step: apply § 1.861-18 to transfer of computer program transactions
- Second step: distinguish substantive IP transactions
  - Acquisition of rights for market exploitation a good description
  - Consistent with software regulations IP vs. product distinction
Character – What Framework to Apply to Cloud

- Third step: apply §1.861-18 principles to analogous content and similar (non-software) transactions
  - e.g. content purchases
- Next step: what’s left to apply to remote access transactions
  - Largely service vs. lease
Section 7701(e) – the Investment Tax Credit Lives On!

- Codifies prior law arising from sale vs. lease distinction in ITC context
- Six statutory factors as indicating lease
  - the service recipient is in physical possession of the property
  - the service recipient controls the property
  - the service recipient has a significant economic or possessory interest in the property
  - the service provider does not bear any risk of substantially diminished receipts or substantially increased expenditures if there is nonperformance under the contract
Section 7701(e) – the Investment Tax Credit Lives On!

- Six statutory factors (cont’d)
  ▪ the service provider does not use the property concurrently to provide significant services to entities unrelated to the service recipient, and
  ▪ the total contract price does not substantially exceed the rental value of the property for the contract period

- Other factors from case law
Section 7701(e) – Application to Remote Access Transactions

- Factors generally favor a services characterization in a cloud computing model (e.g., SaaS):
  - Customer not in physical possession of property √
  - Customer does not control the property √
  - Customer does not have a significant economic or possessory interest in the property √
  - Customer does not bear risk of nonperformance ?
  - Customer does not have exclusive access rights to the software √
  - Payments for access substantially exceed rental value of hardware/software without any charge for services √
Section 7701(e) – Possession and Control

- What makes these factors difficult to apply?
  - Remote user can upload / download applications, manipulate data, etc.
  - Remote user can monitor equipment
  - Few on-site personnel resources needed

- Case authority
  - Xerox - equipment located at premises of user
  - Tidewater - time charter held in control of and in constructive possession of payor - despite supply of crew by owner

- So what are the important factors?
Character – Aggregate or Bifurcate?

- Many transactions might have elements of more than one character
  - On-line enabled games
  - SaaS with content license
Character – Other Similar Contexts

- Treas. Reg. § 1.861-18(b)(2) requires transactions consisting of more than one category to be treated as separate transactions unless “de minimis”

- *Tidewater* (5th Cir. 2009) applied a single character approach

- Subpart F rule in Treas. Reg. § 1.954-1(e)(3) generally provides that some items of income (other than FPHCI) “in unusual circumstances, may not be separately determinable” in which case the “predominant character” of the transaction is used to classify the whole transaction

- Section 199 generally requires separation of services element
Character – the Benefits of a Predominant Character Rule

- Decreases complexity enormously
- Only the 49/51 case is a difficult call
- No apparent opportunity for abuse
- Most transactions probably clearly of one predominant character
Source of Income – Services

Services: Place of performance

- Where are cloud services performed
  - location of software development
  - location of other necessary people functions
  - location of server hosting the software
  - location of marketing or customer support
  - where the customer accesses the software

- SaaS, PaaS and IaaS models point to different results?

- *Piedras Negras* (B.T.A. 1941): Mexican radio station broadcasting into the United States did not have a US trade or business.

- Impact of outsourcing? Attribution? *Le Beau Tours* (2d Cir. 1976) relevant?

- International communications source rules a useful analogy?
Source of Income – Common Fact Situations

- Entity A: Contracting party to provide service
- Entity B: Operates data center
- Entity C: Development of SaaS application
- Entity D: Sales and marketing
Source of Income – the Possible Approaches

– Note: Income is sourced at gross income level
– 100% to data center location
– Mechanical allocation rule
– Look-through to all participants in value chain
– Personnel and assets on entity-by-entity basis
Source of Income – the Data Center

- Rise of outsourcing shows this should not be the sole factor
- Data center normally doesn’t reflect the entrepreneurial inputs
- Even equipment frequently is not at a single location for latency, etc. purposes
- Easily manipulated
- Serious disincentive for foreign groups to use US infrastructure
Source of Income – Mechanical Rule

- Cloud transactions not point-to-point like telecommunications
- Not good match to entrepreneurial or value add activity
Source of Income – Look-Through to Value Chain

- Where to define the boundary
  - Related parties only
  - Delivery-side of business only
  - Development and delivery only
- Any policy reason to favor this?
Source of Income – Assets and Personnel of Separate Entities

- Matches source in each entity to assets/personnel deployed in that place
- Assuming transfer price is right, matches source to economic contributions
- Current authorities support
  - Miller v. Commissioner (73 T.C.M. 2319 (1997))
Source of Income – Assets and Personnel of Separate Entities

- Other analogies
  - Tangible goods supply chain
- Result: different entities in value chain have different sources (assuming all perform services)
  - any policy reason to disfavor this result?
Source of Income – Rental Transactions

- If characterized as rent
  - All income sourced to data center and other equipment location
- Not logical result given equipment deployment practices for cloud infrastructure, and other contributions to cloud computing value
Standards for Taxable Nexus

- US Domestic Law: Income effectively connected with the conduct of a US trade or business
- U.S. Treaties: Business profits attributable to a permanent establishment
Effectively Connected Income

- US trade or business
  - Substantial, continuous and regular activity
  - Performance of services is enough
  - *Miller v. CIR*: Should not attribute activities of independent contractor

- Income effectively connected with USTB
  - US-source income (e.g., services performed in US or US-source rents)

- Should owning and operating US data center or equipment constitute ETB?

- What if assets owned and operated by an affiliate?
Permanent Establishment

- Fixed place of business through which the business of the enterprise is carried on
- Dependent agent that has, and habitually exercises, the authority to conclude contracts in the name of the enterprise
- Services PE
Fixed Place of Business

- When does enterprise have data center premises at its disposal?
  - Control over physical assets
  - Need personnel physically present at the server location?
  - Remote manipulation of software and data okay?
  - Remote monitoring of hardware okay?
Server as PE – Canadian Ruling

- Canada issued ruling that a data center owned and operated by Canadian entity does not constitute a PE of US affiliate
  - Added twist of deemed services PE provision under Canada/US treaty

- Data Center Functions
  - Host group’s website;
  - Hold user data;
  - Serve up advertising; and
  - Perform transaction processing
Server as PE – Canadian Ruling (cont.)

- Key Facts
  - Employees of Canadian company principally responsible for installation, operation, maintenance and repair of the equipment
  - Access to data center location largely restricted to employees of Canadian company
  - Employees of U.S. company visit data center location periodically to inspect, maintain or perform similar services
  - Employees of U.S. company remotely manage the applications and data hosted in the data center, install and uninstall applications, perform maintenance on the hosted applications, etc.
Server as PE – Australian Rulings

- Australian published rulings:
  - Ruling 79967 (online subscription service): PE – Taxpayer owned and operated servers, but no employees physically present
  - TD 2005/2 (trading stock/merchandise to Australian customers through an unrelated ISP): No PE
Contract Conclusion

– Can also create a permanent establishment if done by a dependent agent
– Are contracts concluded at server location?
– If so, on whose authority?
– If not, then who does exercise contracting authority?
  ▪ Those who set terms of trade?
  ▪ Those who drive customers to the site?
BEPS

- BEPS Action 1 focused (in part) on cloud transactions
- Possible proposals
  - Direct tax
  - Character
  - Indirect tax
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